Title of Invention: "METHOD AND APPARATUS FOR HOT UPDATING

OF RUNNING PROCESSES"
Inventor's Name: DAVDA Serial No. 10/650,257 Docket No. 4366-120 Attorney: Bradley M. Knepper Telephone: 303/863-9700

Sheet 1 of 6 sheets



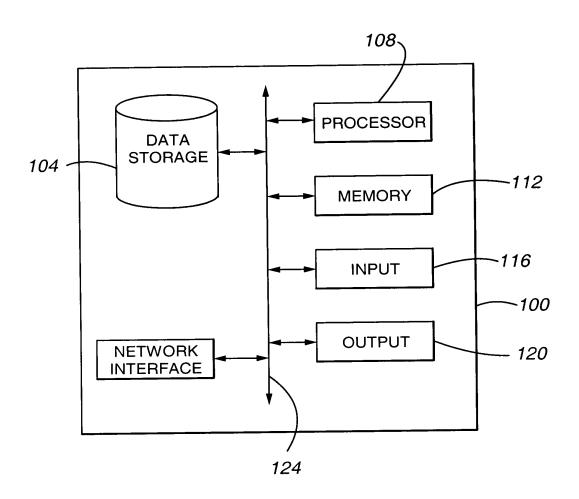


Fig. 1

Title of Invention: "METHOD AND APPARATUS FOR HOT UPDATING OF RUNNING PROCESSES"

OF RUNNING PROCESSES" Inventor's Name: DAVDA Serial No. 10/650,257 Docket No. 4366-120 Attorney: Bradley M. Knepper Telephone: 303/863-9700

Sheet 2 of 6 sheets

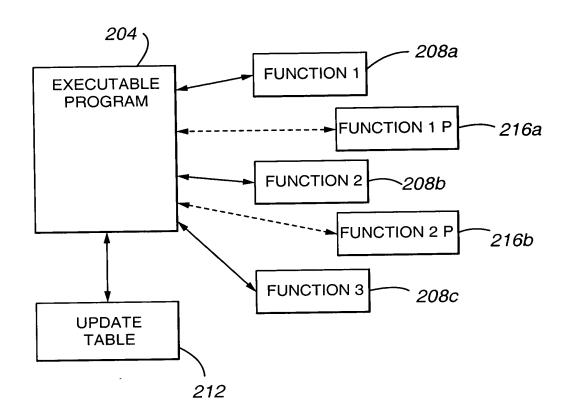


Fig. 2

Title of Invention: "METHOD AND APPARATUS FOR HOT UPDATING
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Inventor's Name: DAVDA
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Sheet 3 of 6 sheets



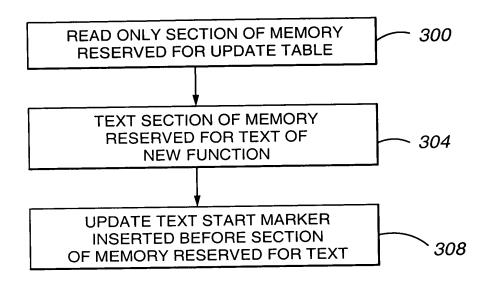


Fig. 3

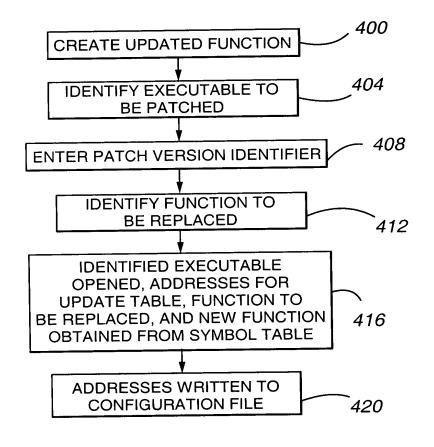


Fig. 4

SEP 2 9 2003

Title of Invention: "METHOD AND APPARATUS FOR HOT UPDATING OF RUNNING PROCESSES"

Inventor's Name: DAVDA Serial No. 10/650,257 Docket No. 4366-120 Attorney: Bradley M. Knept

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Sheet 4 of 6 sheets

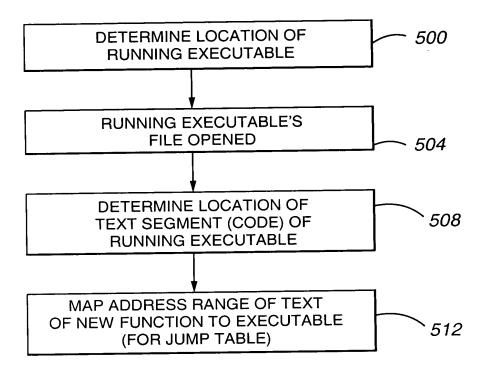
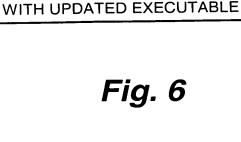


Fig. 5

Title of Invention: "METHOD AND APPARATUS FOR HOT UPDATING OF RUNNING PROCESSES" Inventor's Name: DAVDA Serial No. 10/650,257 Docket No. 4366-120 Attorney: Bradley M. Knepper Sheet 5 of 6 sheets Telephone: 303/863-9700 **IDENTIFY EXECUTABLE** 600 **OPERATING SYSTEM QUERIED** OR PROCESS ID OF EXECUTABLE 604 CONFIGURATION FILE MADE USING CREATE PATCH TOOL 608 OPENED, READ INTO MEMORY INVOKE SIGNAL HANDLER EMBEDDED IN EXECUTABLE, REMAPPING VIRTUAL ADDRESS 616 RANGE TO UPDATED EXECUTABLE INVOKE DEBUGGER, HALT *620* **PROCESS** DETERMINE POSITION OF 624 INSTRUCTION POINTER INSTRUCTION POINTER 628 YES WITHIN X BYTES FROM FUNCTION TO BE PATCHED? **♦** NO POPULATE UPDATE TABLE WITH 636 ADDRESS OF NEW FUNCTION INJECT JUMP INSTRUCTION FOR OLD FUNCTION FOLLOWED BY 640 ADDRESS OF UPDATE TABLE ENTRY



644

648

DETACH DEBUGGER, RESUME PROCESS

REPLACE EXECUTABLE IN STORAGE

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OF RUNNING PROCESSES" inventor's Name: DAVDA Serial No. 10/650,257 Docket No. 4366-120 Attorney: Bradley M. Knepper Telephone: 303/863-9700

Sheet 6 of 6 sheets

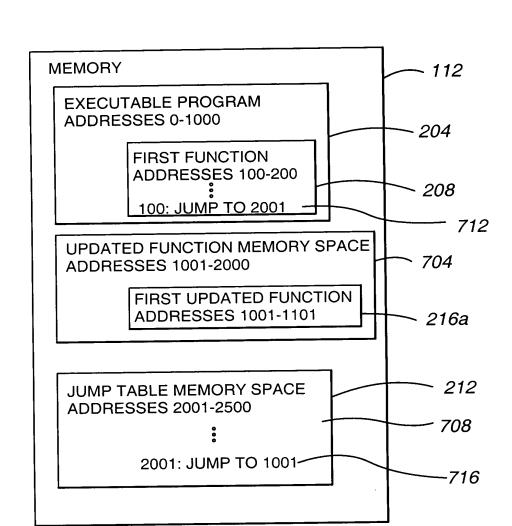


Fig. 7